

REMARKS

Applicant acknowledges with appreciation the rejoining of claim 44 to the examined claims. Applicant also gratefully acknowledges the allowance of claims 1, 4-7, 9, 10, 13-20, 26-34, 37, 38 and 41-45.

Claims 39, 46, 48 and 49 stand rejected. Claims 39 and 46 have been amended. Applicant reserves the right to pursue the original claims and other claims in this and other applications. In view of the amendments to the claims and the remarks below, Applicant respectfully requests the rejections be withdrawn and the application be allowed.

The drawings stand objected to as not showing every feature of the invention as specified in the claims. Specifically, the drawings stand objected to as not showing every feature recited in claim 39. Claim 39 has been amended to more clearly describe an embodiment of the invention. Amended claim 39 is fully supported by the drawings, and, as such, Applicant respectfully requests that the objection to the drawings be withdrawn.

Claim 39 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, claim 39 stands rejected because "said single active area extension region and said halo implant" are not clearly described or shown to "overlap" "at least part of said floating diffusion region." The Examiner states, however, that "[t]he drawings show the active area extension region and the halo implant adjacent the floating diffusion region." Office Action, p. 3. Accordingly, claim 39 has been amended to recite "said single active area extension region and said halo implant adjacent at least a part of said floating diffusion region." Claim 39 is clearly supported by figures 1(a) and 8(a)-(c) of the current application.

Applicant respectfully requests that the rejection be withdrawn and claim 39 be allowed.

Claims 46 and 49 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Stevens in view of Kuriyama and Komuro. The rejection is respectfully traversed.

Claim 46 recites a pixel cell that includes a transistor “having a gate length which is greater than that of all other transistors of a same pixel.” Because the combination of Stevens, Kuriyama and Komuro fails to teach or suggest a pixel cell transistor with a gate length greater than all other transistor gates in the same pixel, the combination of Stevens, Kuriyama and Komuro fails to render claim 46 unpatentable.

Stevens is relied upon in the Office Action to teach that a pixel cell may include a transistor “having a gate length which is greater than that of *any* other transistor of a same pixel.” Office Action, p. 4 (emphasis added); *see also* Stevens, Fig. 2. However, “[t]his is not the same as stating the gate length is greater than *all* other transistors.” Office Action, p. 7 (emphasis added). Figure 2 of Stevens fails to show a transistor gate length that is greater than all other transistor gates within the same pixel. Nowhere else in Stevens is a transistor gate shown or described to be greater than all other transistor gates within the same pixel. Furthermore, claim 32, which is allowable, recites a similar limitation which is referenced by the Examiner in his discussion of distinctions between Stevens and claim 46, thereby indicating that the inclusion of a similar limitation within claim 46 would overcome Stevens. For at least these reasons, Stevens fails to teach or describe every limitation of claim 46.

The combination of Kuriyama and Komuro also fails to teach that a pixel cell transistor has a gate length that is greater than all other transistor gates within the same

pixel. Therefore, because neither Stevens, Kuriyama nor Komuro, either individually or combined, teach every limitation recited by claim 46, the cited combination fails to render claim 46 unpatentable.

Claim 49, which depends from claim 46, is also allowable for at least the same reasons that claim 46 is allowable. Accordingly, the rejection should be withdrawn and the claims allowed.

Claim 48 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Stevens in view of Kuriyama and Komuro, as applied to claim 46, and further in view of Choi. Applicant respectfully traverses the rejection.

Claim 48 depends upon claim 46. As discussed above, claim 46 is allowable over the combination of Stevens, Kuriyama and Komuro because the combined references fail to teach that a pixel cell transistor has a gate length that is greater than all other transistor gates within the same pixel. Choi also fails to teach or suggest subject matter that relates to transistor gate lengths. Because the combination of Stevens, Kuriyama, Komuro and Choi fails to teach every limitation recited by claims 46 and 48, claim 48 is allowable over the cited combination. Applicant respectfully requests that the rejection be withdrawn and claim 48 be allowed.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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